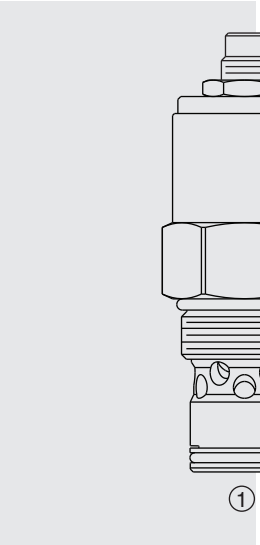
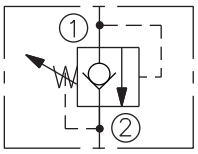
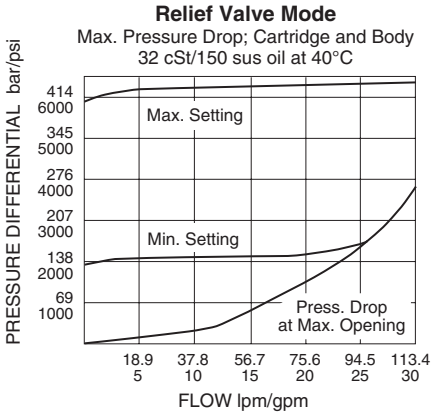
RVCV56-20 Relief, Direct Acting, Anti-Cavitation

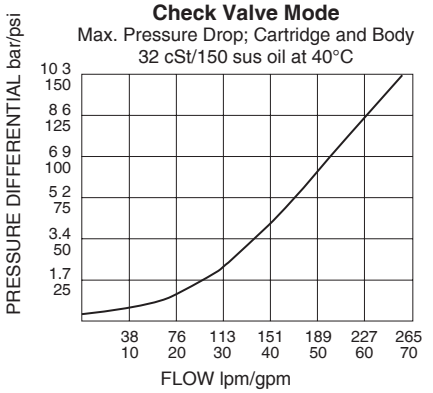


ISO SYMBOL



PERFORMANCE





DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type hydraulic relief valve with a built-in reverse-flow anti-cavitation check valve. It is intended for use as a pressure limiting and regulating device in demanding, high-pressure hydraulic circuits which require fast response, low hysteresis, low leakage, low pressure override, and reverse free-flow features.

OPERATION

The **RVCV56-20** blocks flow from 1 to 2 until sufficient pressure is present at 1 to displace the poppet off its seat. Relief flow discharges to port 2. Reverse flow occurs from 2 to 1 when differential pressure between 2 and 1 exceeds the check spring value.

FEATURES

- Maximum pressure 420.6 bar (6100 psi) at port 1.
- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Fast, smooth response to pressure surges.

RATINGS

Pressure Rating: 420 bar (6100 psi) at port 1; 70 bar (1000 psi) at port 2

Proof Pressure: 480 bar (7000 psi)

Burst Pressure: 965 bar (14,000 psi)

Flow Rating: Port 1 to 2: 115 lpm (30 gpm); Port 2 to 1: 175 lpm (46 gpm)

Overshoot: Less than 20% of setting

Adjustable Pressure Range, Port 1 to 2: 140 bar (2000 psi) minimum; 420 bar (6100 psi) maximum

Crack Pressure Defined: 0.95 lpm (0.25 gpm)

Maximum Reseat Pressure, Port 1 to 2: 85% of crack pressure

Leakage at Port 2: 10 drops/minute (0.53 ml/minute) at 103.4 bar (1500 psi) max.

Anti-Cavitation Crack Pressure, Port 1 to 2: 0.34 ± 0.07 bar (5 ± 1.0 psi)

Temperature: with Buna N seals: -40°C to 100°C (-40°F to 212°F); with Fluorocarbon seals: -26°C to 204°C (-15°F to 400°F); with Polyurethane seals: -54°C to 107°C (-65°F to 225°F)

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

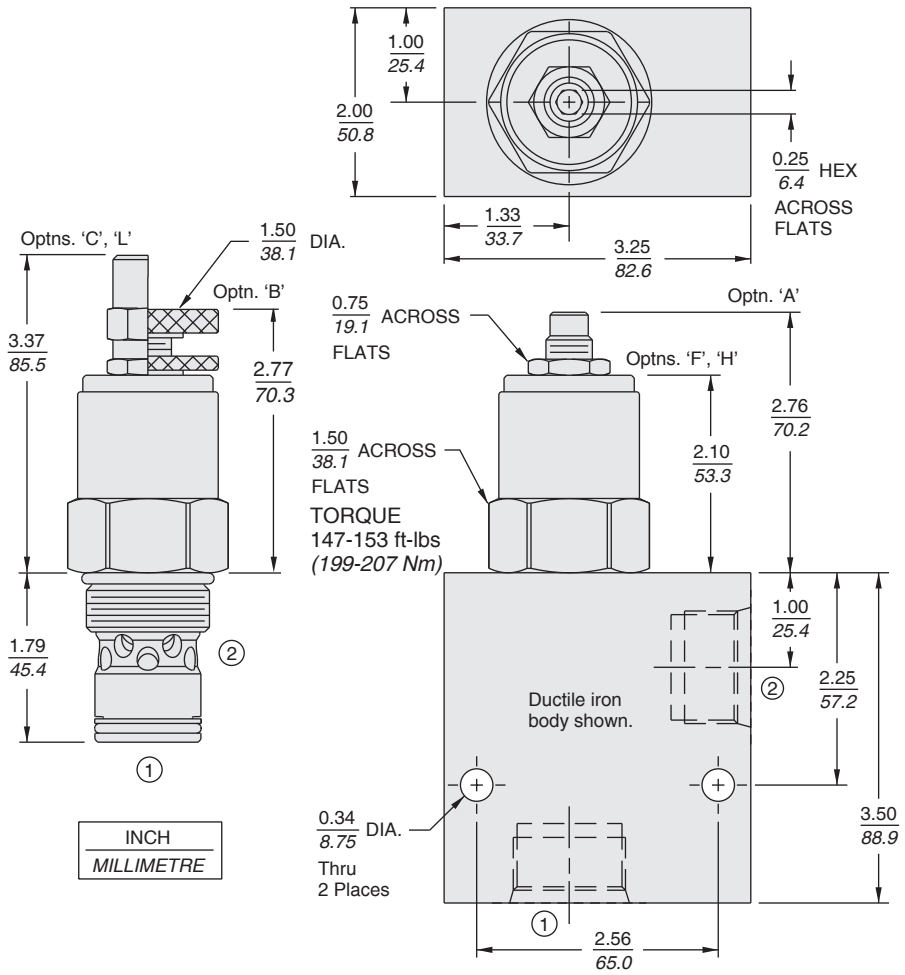
Installation: No restrictions; See page 9.020.1

Cavity: VC16-2; See page 9.116.1

Cavity Tool: CT16-2XX; See page 8.600.1

Seal Kit: SK16-2x-B; See page 8.650.1

DIMENSIONS



MATERIALS

Cartridge:

Weight:

Option	*A*	*B*	*C,L*	*F,H*
lb	1.27	1.33	1.36	1.24
kg	0.58	0.60	0.62	0.56

Steel with hardened work surfaces. Zinc-plated exposed surfaces. O-rings and polyester elastomer back-up standard.

Ported Body: Aluminum: 0.57 kg. (1.25 lbs.); Anodized high-strength 6061 T6 Aluminum alloy, rated to 207 bar (3000 psi). Ductile iron body required for operation over 207 bar (3000 psi). See page 8.016.1

TO ORDER

RVCV56-20__ - __ - __ - __ __ / __ __ __ __

Adjustment Option

1/4 in. Hex Allen Head	**A**
1-1/2 in. Dia. Alum. Knob	**B**
Option A w/ Cover Cap	**C**
Factory Preset Non-Adj.	**F**
Factory Preset Hidden Adj.	**H**
Option C w/ Lockwire Holes	**L**

Porting

Cartridge Only	**0**
SAE 12	**12T**
SAE 12 Ductile Iron	**12TD**
SAE 16	**16T**
SAE 16 Ductile Iron	**16TD**
3/4 in. BSP*	**6B**
3/4 in. BSP* Ductile Iron	**6BD**
1 in. BSP*	**8B**
3/4 in. BSP* Ductile Iron	**8BD**

*BSP Body; UK Mfr. Only

Seals

N	Buna N
V	Fluorocarbon
P	Polyurethane

Pressure Range

30	137.9 to 206.8 bar (2000 to 3000 psi)
45	213.7 to 310.3 bar (3100 to 4500 psi)
60	317.2 to 420.6 bar (4600 to 6100 psi)

Setting in bar

Specify, for example:

M210 210 bar

Setting in psi

Specify, for example:

30.0 3000 psi